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HUMAN-WILDLIFE CONFLICT & COEXISTENCE
/ CASE STUDIES

COEXISTENCE WITH LARGE CATS: EXPERIENCE FROM A CITIZEN SCIENCE PROJECT

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INTRODUCTION

Sanjay Gandhi National Park (SGNP) is one of four parks in the world adjacent to a large metropolis, that occupies about 100 km² with a minimum density of ~20 000 people/km² and contains diverse wildlife such as chital *Axis axis*, sambhar *Rusa unicolor*, mugger crocodiles *Crocodylus palustris*, macaques *Macaca mulatta* and leopard *Panthera pardus*.

BETWEEN 2004-2005 THERE WERE MANY LEOPARD ATTACKS ON PEOPLE (AVERAGING APPROXIMATELY 30 ATTACKS/YEAR).

These incidents coincided with an increase in the number of leopards captured and translocated to the area. In 2011, discussions on addressing these issues were initiated with the authorities in the area.

AS A RESULT THE PROJECT MUMBAIKARS FOR SGNP (MFSGNP) WAS INITIATED TO ADDRESS THE HUMAN-LEOPARD CONFLICT IN SGNP TO IDENTIFY THE CAUSES OF THE CONFLICT AND ATTEMPT TO MITIGATE THEM.

KEY INSIGHTS & LESSONS LEARNT
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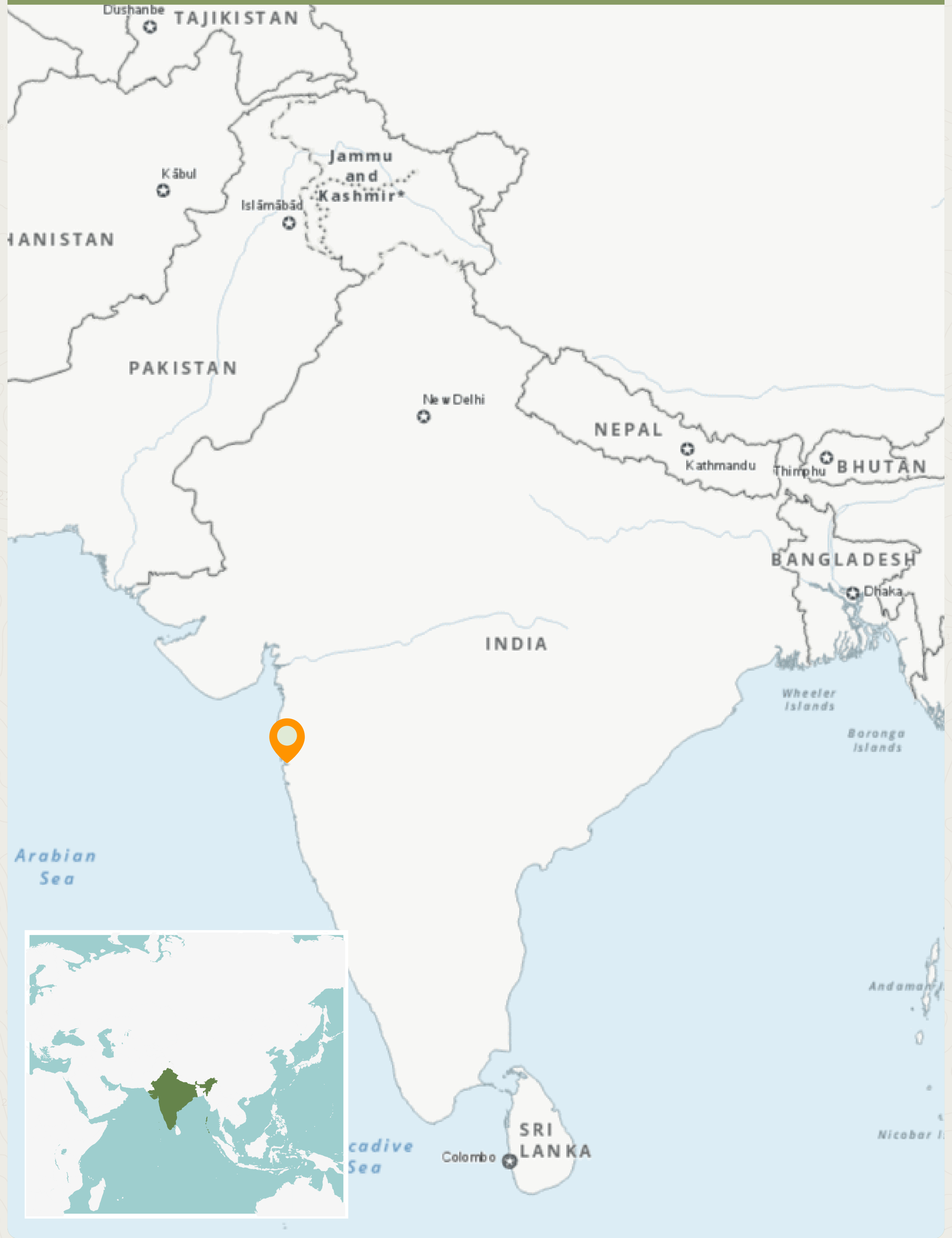
SANJAY GANDHI

NATIONAL PARK

MUMBAI, INDIA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Source: UN, 2020

UN. 2020. Map of the World [online]. [Cited 1 January 2021]. https://geoservices.un.org/Html5Viewer/index.html?viewer=clearmap

PROCESS

In 2011, the MfSGNP project started as a collaborative effort between the Sanjay Gandhi National Park and the Wildlife Conservation Society - India with the prime goal of engaging and working with community members. The then Park Director organised an open meeting inviting various stakeholders, including local authorities, media members, and enthusiastic volunteers from the local community.

> THROUGH DISCUSSIONS AT THE MEETING, IT WAS DECIDED TO DEVELOP A PROJECT INVOLVING ALL STAKEHOLDERS, VOLUNTEERING ON DIFFERENT ASPECTS OF THE PROJECT THAT STAKEHOLDERS WERE INTERESTED IN.

The critical issue appeared to be that the dominant narrative about leopards in Mumbai was one rooted in fear leading to pressure to set up trap cages, leading to the increased conflict. It was evident that this narrative needed to change.

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The project's initial aims were to better understand various aspects about the Mumbai leopards, and several activities were carried out to achieve this. A camera-trap study was conducted to assess the mammalian species in the region and identify individual leopards. Patterns to the attacks were determined by analysing historic conflict data between 1986 and 2013 and using media reports to map interactions. At the same time, the stray dog population was also assessed in the area as a potential prey source for the leopards. A social science study was conducted as part of the project to understand how people related to the leopards.

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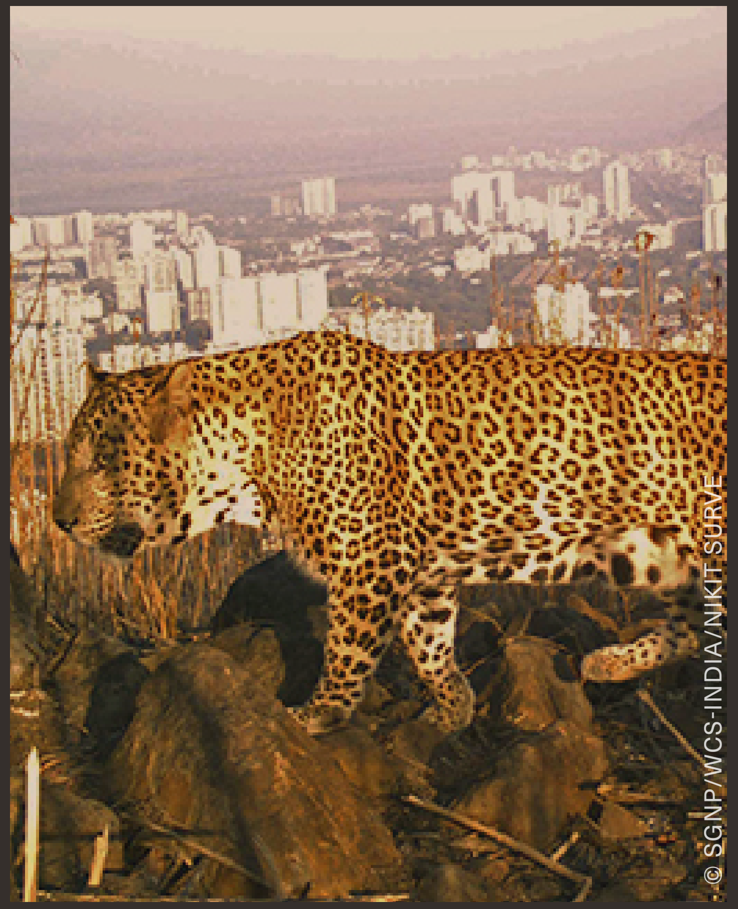

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PROBLEM ANALYSIS

Mumbai had a history of leopard attacks dating back to the late 1990s, but no large study had been conducted before the start of the MfSGNP project. An analysis of the attack data indicated that the leopard attacks were possibly due to capturing and releasing leopards in the region and this was also the management experience.

EVEN IN THE ABSENCE OF ATTACKS, THERE WAS OFTEN POLITICAL PRESSURE TO CATCH AND RELEASE LEOPARDS TO APPEASE THE LOCAL COMMUNITIES, BECAUSE OF THE FEAR THAT THERE WAS FOR THE ANIMALS.

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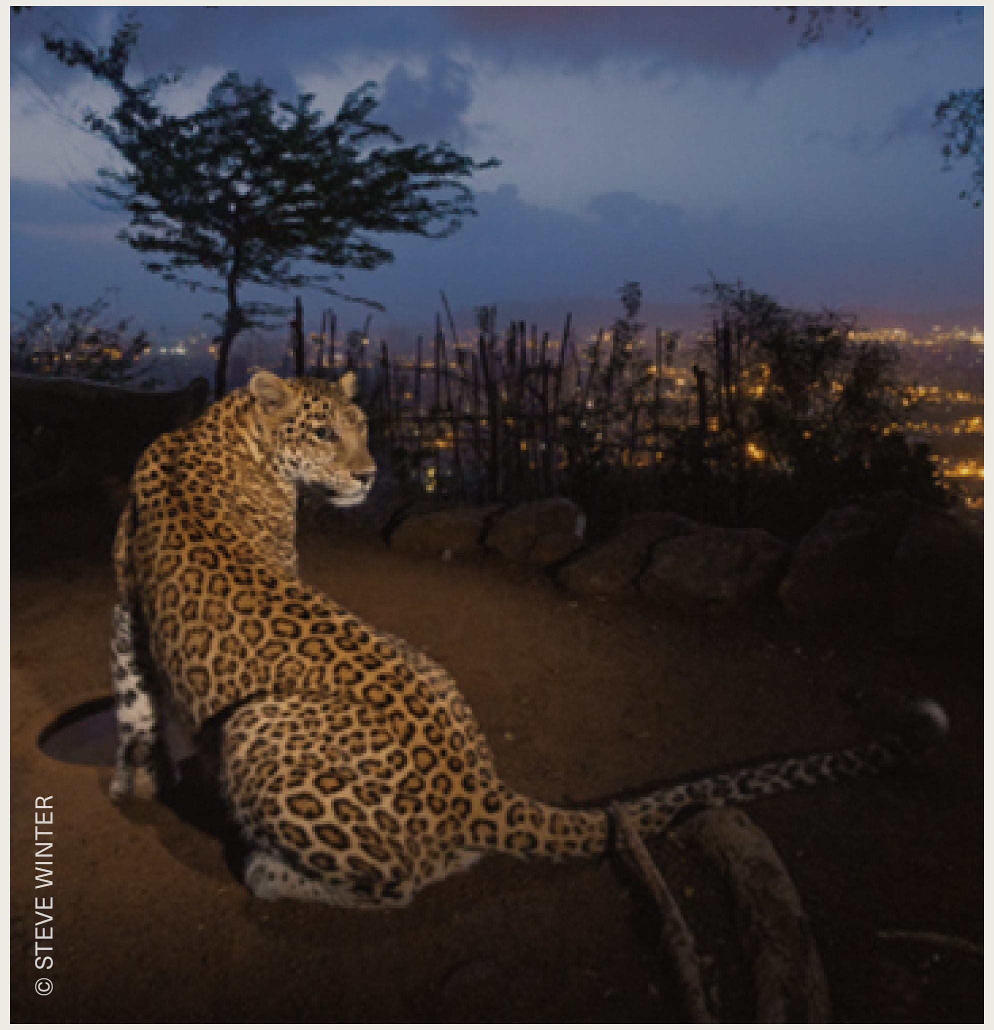

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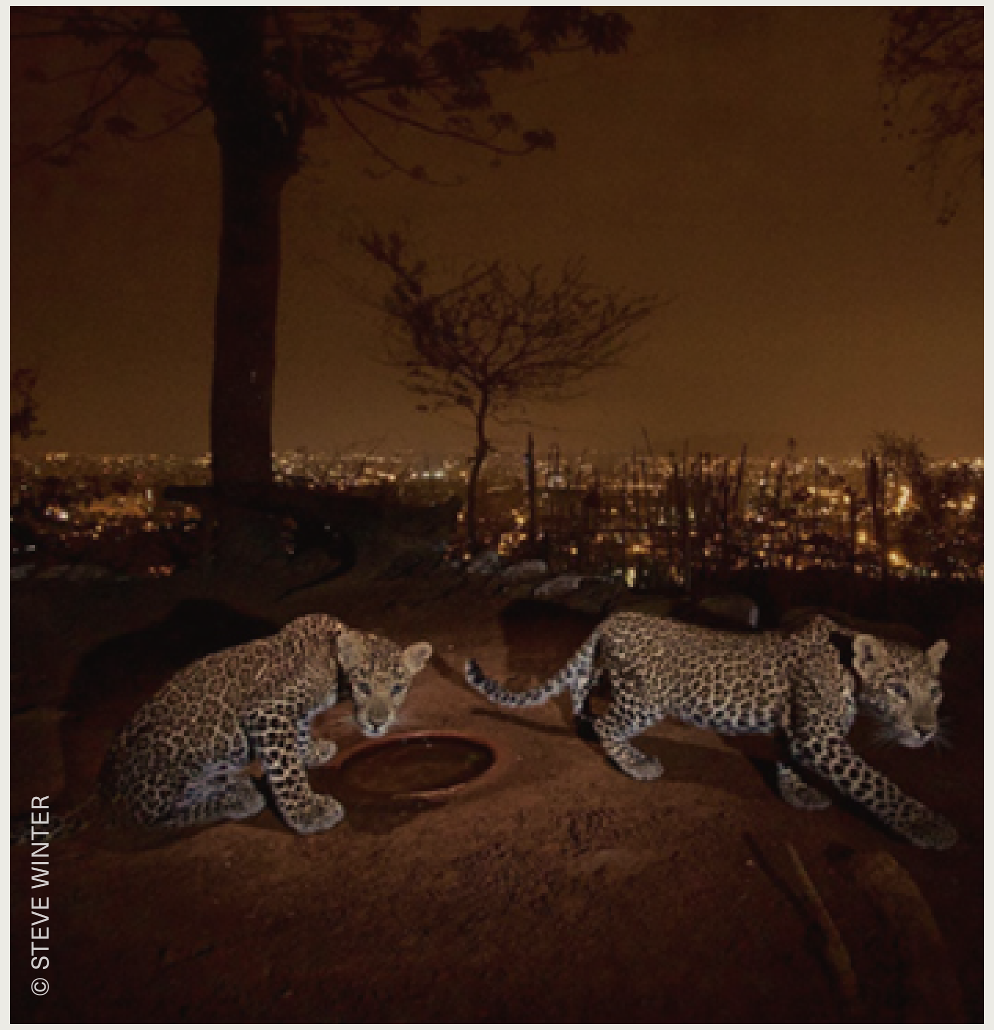

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While this offered short-term solutions to the problem, it potentially created more significant impacts in the future. The demographics of attack victims were also determined and the activity taking place at the time of the attack to understand which members of the community were most vulnerable to interactions and which activities increased the risk of the interactions.

Between November 2011 and April 2012 the camera trap study identified a minimum of 21 leopards in the area and that natural prey in the form of sambhar and chital were abundant within the SGNP. The area was also found to have a very high stray dog density, which was likely a result of improper disposal of rubbish at sites.

THESE FACTORS MEANT THAT SGNP WAS LARGELY FAVOURABLE IN SUPPORTING A RELATIVELY LARGE NUMBER OF LEOPARDS.

The project's social study highlighted that the communities living alongside the periphery of SGNP were a cosmopolitan mix, resulting in various perceptions of how the landscape should be viewed. From an area that needs protecting to providing a valuable resource base for people.

THE NARRATIVES OF LEOPARDS WERE ALSO FOUND TO VARY BETWEEN THE COMMUNITIES AND RANGED FROM BLOODTHIRSTY MONSTERS TO HARMLESS NEIGHBOURS, GODS AND ELUSIVE MYSTERIES, HIGHLIGHTING THE DIFFERENT PERCEPTIONS THE COMMUNITIES HAD REGARDING LEOPARDS.

The project found that the media's reporting of incidents exacerbated the situations by increasing Mumbaiker's fear of leopards and their frustration with responses to the problem.

THE MEDIA HAD BEEN SENSATIONALISING THE LEOPARD ISSUE, AND IT HAD CREATED A SITUATION WHERE PEOPLE THOUGHT THAT ANY LEOPARD SPOTTED WAS A DANGEROUS MAN-EATER.

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ACTIVITIES

Raising awareness was a prime part of the project. The project had many enthusiastic volunteers who organised and joined awareness campaigns that addressed the issue and tried to shift the community's attitude towards leopards by providing information that was targeted at improving human safety. Posters were created and distributed that highlighted what precautions to take to deal with leopards in and around human-dominated areas to avoid the chances of negative interactions occurring.

The Forest Department meanwhile improved their response towards the public. Control rooms were set up and rescue teams were equipped and trained. Along with local volunteers, they responded immediately and whenever a leopard sighting was reported, the rescue team along with citizens would attend to monitor the area and hold an awareness session on what to do and what not to do when living near leopards.

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THE INVOLVEMENT OF LOCAL COMMUNITY MEMBERS IN THE RESCUE TEAMS OFTEN MEANT THAT INFORMATION WAS BETTER RECEIVED BY THE COMMUNITY.

The awareness workshops replaced the requests for translocating the leopards, particularly if they could respond before any attacks occurred. The direct engagement with the communities helped improve relationships as they were being supported directly.

Regular workshops were held with representatives from the local media to engage with the journalists to report on incidences sensitively and accurately. Relationships were established, and information would be provided regularly on leopards in general, incidences that had occurred and the responses to incidences. At the same time, images and videos of leopards would also be offered to journalists to use in their articles.

WHEN ENGAGING WITH THE MEDIA THE NARRATIVE WAS NOT ONE OF CRITICISM BUT THAT THEY HAD AN IMPORTANT ROLE TO PLAY IN THE OUTCOMES OF THE SITUATION BY EDUCATING THE GENERAL PUBLIC WITH RESPONSIBLE INFORMATION AND PUSHING FOR POLICY CHANGES WHERE NEEDED.

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The project provided talks for media students at the local colleges to ensure the next generation of journalists continues to report responsibly.

The issue of stray dogs in the SGNP area potentially acting as an attractant for leopards was addressed by raising awareness around the need for the proper disposal of waste. The different stakeholders worked together to raise awareness around this issue with the residents in the SGNP area and agreed to take the case to the local authorities. The project provided a letter for the residents to support them, highlighting the risk the waste was causing and requesting the authorities for support in addressing the matter.

OUTCOMES

Although the number of incidents involving leopards has not disappeared entirely, nor will it given the nature of the shared spaces.

HOWEVER, SINCE 2013, ONLY 5 ATTACKS OCCURRED IN 2017 AND ANOTHER 5 OCCURRED IN 2021.

In both cases because of the continuous citizen science monitoring of leopards, the individual leopards could be identified and removed. The awareness campaigns and the work conducted by the project to reduce the chances of leopards attacking people resulted in a greater communal acceptance of the leopard being achieved.

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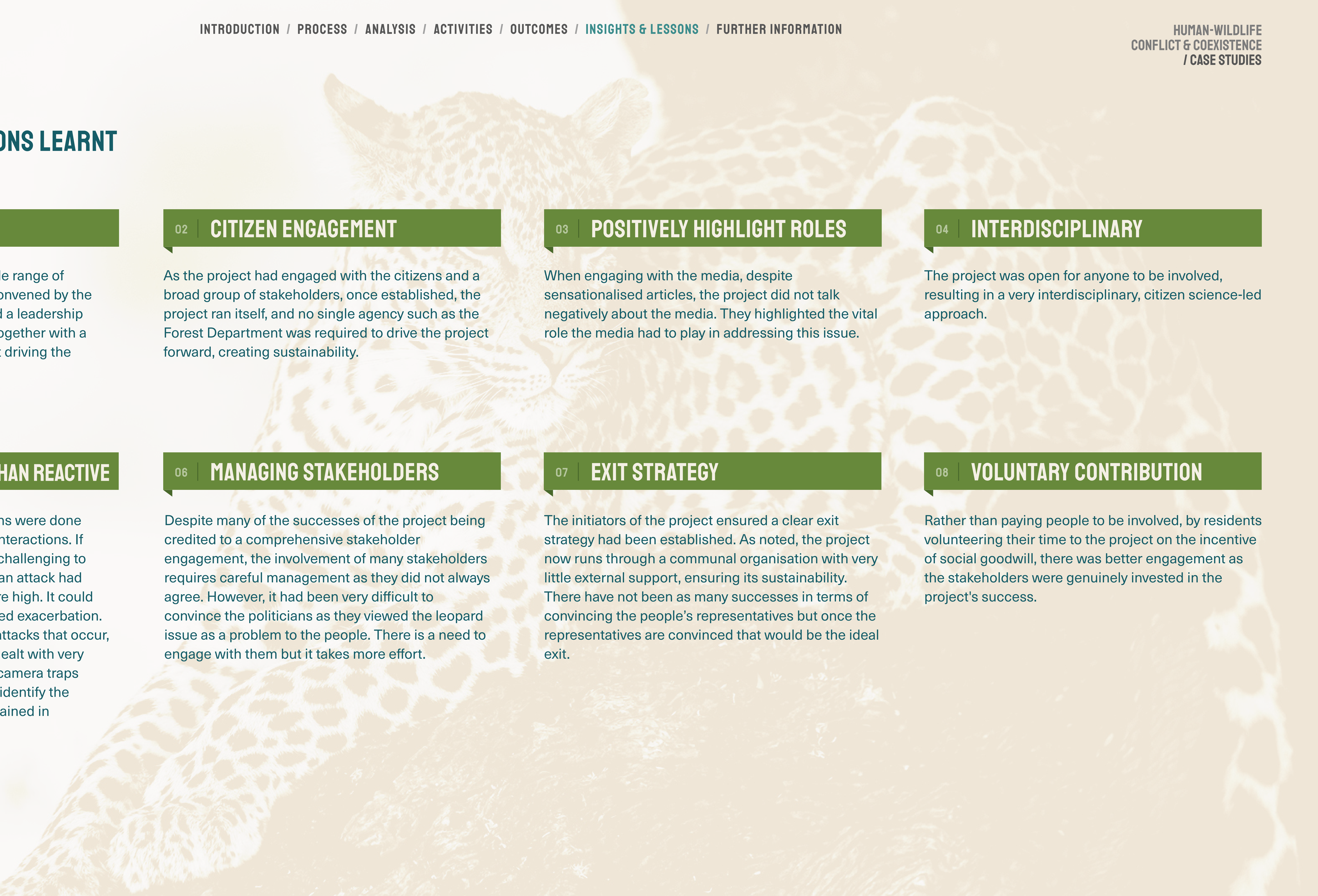
A media analysis of print news headlines from before and after the activities with the media found a positive difference in the way the media reported leopards incidences in Mumbai. If troubling articles were published, other journalists would often engage with the author to make them aware of the problems the article could cause. Journalists would also write articles about what could be done in response to incidences, which helped pressure politicians to make specific changes. For example, after it had been reported that a young child had been killed by a leopard whilst walking to school, rather than writing articles specifically about the attack, articles were written to push for school buses to be supplied in the area.

> THE PROJECT CONTINUES TO BE RUN COMMUNALLY BY THE FOREST DEPARTMENT ALONG WITH THE RESIDENTS OF MUMBAI TO ENSURE THAT INCIDENTS ARE MINIMISED AND WHERE THEY DO OCCUR ARE MANAGED APPROPRIATELY.



KEY INSIGHTS & LESSONS LEARNT

01 LEADERSHIP

Although the project involved a wide range of stakeholders, it had initially been convened by the Forest Department, which provided a leadership role, bringing all the stakeholders together with a particular official in the department driving the project.

02 CITIZEN ENGAGEMENT

As the project had engaged with the citizens and a broad group of stakeholders, once established, the project ran itself, and no single agency such as the Forest Department was required to drive the project forward, creating sustainability.

03 POSITIVELY HIGHLIGHT ROLES

When engaging with the media, despite sensationalised articles, the project did not talk negatively about the media. They highlighted the vital role the media had to play in addressing this issue.

04 INTERDISCIPLINARY

The project was open for anyone to be involved, resulting in a very interdisciplinary, citizen science-led approach.

05 PROACTIVE RATHER THAN REACTIVE

Many of the conducted interventions were done when there had been no negative interactions. If interventions were reactive, it was challenging to engage with the community when an attack had occurred as people's emotions were high. It could be a very intense situation that risked exacerbation. Now even when there are the few attacks that occur, there is no hype and the matter is dealt with very rationally. The citizens employ the camera traps along with the Forest Department, identify the animal and it is removed and maintained in permanent captivity.

06 MANAGING STAKEHOLDERS

Despite many of the successes of the project being credited to a comprehensive stakeholder engagement, the involvement of many stakeholders requires careful management as they did not always agree. However, it had been very difficult to convince the politicians as they viewed the leopard issue as a problem to the people. There is a need to engage with them but it takes more effort.

07 EXIT STRATEGY

The initiators of the project ensured a clear exit strategy had been established. As noted, the project now runs through a communal organisation with very little external support, ensuring its sustainability. There have not been as many successes in terms of convincing the people’s representatives but once the representatives are convinced that would be the ideal exit.

08 VOLUNTARY CONTRIBUTION

Rather than paying people to be involved, by residents volunteering their time to the project on the incentive of social goodwill, there was better engagement as the stakeholders were genuinely invested in the project's success.

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ABOUT THE CASE STUDIES

The **Food and Agriculture Organisation** (FAO) of the United Nations and the **IUCN SSC Human-Wildlife Conflict Task Force** (HWCTF) have jointly developed a set of case studies with the aim of covering the process projects have taken to manage various aspects of a human-wildlife conflict & coexistence situation. This case study is one of many that will be used to illustrate key components of the **IUCN SSC Guidelines on Human-Wildlife Conflict & Coexistence.** The published case studies can be found in the **Human-Wildlife Conflict & Coexistence Library**.

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